

1.932  
#2N47

# news letter

Issued monthly by the  
Bureau of Agricultural Chemistry and Engineering of the  
U. S. Department of Agriculture. *Not for publication.*

LIBRARY  
RECEIVED  
★ SEP 29 1941 ★  
U. S. Department of Agriculture



Vol. 3

September, 1941

No. 3

## GENERAL ADMINISTRATION

Twenty-five years ago the soybean was used only for hay which the farmers found hard to cure, whereas today there are over 300 uses for the crop, said Dr. Knight, in a radio talk delivered during the National Farm and Home hour on September 4. Acreage has increased from 50,000 in 1907 to about 10 million acres in 1940. The average price the farmer received for his crop in 1941 was almost double that of 1940. When scientists developed methods for obtaining oil and protein from the soybean, said Dr. Knight, they unlocked the door to seemingly endless uses. The most recent industrial use for soybean protein - in the manufacture of adhesives - has made possible the release for defense purposes of milk casein formerly used for adhesives. Among other uses the soybean now provides oil for motors, oil and resins for paints and varnishes, plastic material for gear-shift handles and engine distributor covers, bath and laundry soap, insecticides, a water-resistant glue, red ink for printing, linoleum, celluloid, oil for cooking and salads, flour for bread, pastries and ice cream cones, etc. And that is only the beginning of products that may be derived from America's wonder crop, said Dr. Knight.

- - -

Employees ordered to active duty with the military or naval forces are entitled to compensation for accumulated or current accrued leave, according to Public Law 202, 77th Congress, approved August 1, 1941. Several legal and administrative questions which have arisen regarding the procedure for carrying out the provisions of the law are being presented to the Comptroller General for decision. The law is quoted below in its entirety.

"Be it enacted by the Senate and House of Representatives of the United States of America in Congress assembled, That employees of the United States Government, its Territories or possessions, or the District of Columbia (including employees of any corporation created under authority of an Act of Congress which is either wholly controlled or wholly owned by the United States Government, or any corporation, all the stock of which is owned or controlled by the United States Government, or any department, agency, or establishment thereof, whether or not the employees thereof are paid from funds appropriated by Congress), who have heretofore or who may hereafter be ordered to active duty with the military or naval forces



of the United States shall be entitled to receive, in addition to their military pay, compensation in their civilian positions covering their accumulated or current accrued leave or to elect to have such leave remain to their credit until their return from active military or naval service."

- - -

Dr. Knight, Dr. Skinner, Mr. Donovan, Mr. Speh and Mr. Gise met with representatives of the Budget Bureau on August 4 and 8 to consider special defense estimates for the remainder of the fiscal year 1942.

- - -

An effort is being made by the Department to have assigned to all bureaus engaged in scientific research the high defense priority rating of A-2 which will permit the purchase of supplies and equipment essential for research work.

- - -

Miss C. E. Preinkert, Chief of the Bookkeeping Section, visited the Eastern Regional Research Laboratory in August in order to examine accounting procedures and bookkeeping records. In the near future Miss Preinkert will also visit the Northern, Western and Southern Regional Research Laboratory and the field stations at Los Angeles and San Francisco, Calif.

- - -

L.P. Gise, Assistant Chief, Administrative Services Division, has been designated by Dr. Knight as Division Chairman of the Bureau to conduct the Silver Anniversary Roll Call of the District Chapter of the American Red Cross. This roll call will give the employees of the Bureau an opportunity to become members of the National Red Cross and will be conducted between September 22 and October 20.

\* \* \*

#### EASTERN REGIONAL RESEARCH LABORATORY

Mr. Noble Payton of Hampton Institute, Hampton, Va., spent several days during August at the Eastern Laboratory, observing the research activities being carried on.

- - -

The Catalyst for September, 1941, an article entitled "The Eastern Regional Research Laboratory" by R. E. Lothrop. "Tobacco Research at the Eastern Regional Research Laboratory" by E. G. Beinhart and J.J. Willaman, also was published in the September, 1941, issue of The Catalyst.

- - -

J.C. Long, of the Tobacco By-Products and Chemical Corporation, visited the Laboratory in reference to nicotine matters.

- - -

Professor Hopkins of the University of Illinois spent the afternoon of September 12 with Dr. M.J. Copley.

- - -



On September 5, R. E. Lothrop broadcast over Station WCAU, Philadelphia, on the subject "What Can be Done with Surplus Apples?"

R. W. Frey, Chief of the Hides, Tanning Materials and Leather Division of the Eastern Laboratory, and the members of his Division, have now transferred their work from Washington to Philadelphia. This Division, which was formerly the Hides, Tanning Materials and Leather Section of the Industrial Farm Products Research Division, has been carrying on activities in Washington until such time as installation of laboratory facilities in the Eastern Laboratory was completed.

Mr. Frey, and Ira D. Clarke, spent the first part of the week of August 10 in Farmville, Va., and vicinity, conducting, in cooperation with representatives of the Bureau of Plant Industry, semi-commercial experiments on the artificial drying of sumac in connection with the work of the Division on the development of domestic tanning materials.

W. L. Gibb, Resident Engineer, resigned in August to assume the duties of Chief Engineer for a large agricultural development in Haiti. The Haitian development is financed by the United States and Haitian Governments and is an extension rehabilitation project. Mr. Gibb had general charge of the construction of the Eastern Laboratory from its inception.

R. L. Hanson, Associate Engineer of the Bureau in Washington, spent August 21 at the Laboratory.

A large number of the staff of the Eastern Laboratory attended the meeting of the American Chemical Society held in Atlantic City, N.J. This meeting was attended by one of the largest groups of chemists in the history of the Society. Many chemists returning from the meeting stopped in Philadelphia to visit the laboratory, and the visitors were in general favorably impressed with the progress being made in the program of the Laboratory. Among those who visited the Laboratory enroute from the meeting were Dr. Gerald A. Fitzgerald of Central Laboratories, General Foods Corporation, Hoboken, N.J., and Dr. Evald L. Skau of the Southern Laboratory.

J. F. Couch, of the Analytical and Physical Chemistry Division, presided over the meetings of the History of Chemistry Section of the A.C.S. meeting during the week of September 8.

On September 10 a paper entitled "The Pyrolysis of Lactic Acid Derivatives. The Conversion of Alpha-Acetoxypropionate into Methyl Acrylate" by Lee T. Smith, C. H. Fisher, W. P. Ratchford, and M. L. Fein, of the Carbohydrate Division, was presented at the A.C.S. meeting by Dr. Fisher.

Dr. Frédéric R. Senti, who received his degree at Johns Hopkins in 1939, and specialized in crystal structures in X-rays, has reported to work as Assistant Physicist in the Analytical and Physical Chemistry Division.



SOUTHERN REGIONAL RESEARCH LABORATORY

Charles L. Sens left September 3 for points in New England in connection with technical specifications for textile equipment of the Southern Laboratory. Mr. Sens will stop in Washington, D. C., on his return to New Orleans to confer with Bureau officials relative to the research program of the Cotton Processing Division.

Cleveland L. Adams has been appointed Associate Cotton Technologist in the Cotton Processing Division. Mr. Adams received his B.S. degree from the Alabama Polytechnic Institute.

Rose F. Monachino has been transferred to the Western Regional Research Laboratory as Junior Agricultural Economist. Miss Monachino was formerly a member of the staff of the Cotton Processing Division.

C. M. Asbill, Jr., of the Cotton Processing Division, is in Washington assisting in the Bureau's National Defense Work on cotton.

A. Mason DuPre Jr., of the Cotton Processing Division, is in Washington assisting with the projects dealing with the use of cotton in the National Defense program.

Dr. J. David Reid has returned to New Orleans from the Hercules Powder Company at Hopewell, Va., after completion of a cooperative defense project on the nitration of lint cotton.

The Laurel, Miss., starch plant of Sweet Potato Growers, Inc., operated with the technical advice and assistance of the Southern Regional Research Laboratory, opened the manufacturing season September 9, with the largest crop in its history, in prospect. A new starch blending plant, designed by the Sweetpotato Products, and Engineering and Development Divisions, will be placed in service. During the absence from the United States of Dr. F. H. Thurber, R. T. Balch of the Agricultural Chemical Research Division will be stationed at Laurel for consultation, on the technical operations. Mr. Balch has been associated with the sweetpotato starch work since its beginning in the Bureau.

In order to familiarize the members of the Laboratory staff with the work and problems of the different Divisions, a series of conferences has been scheduled, at each of which one of the Divisions will act as host to the rest of the Laboratory. The plan of these conferences is to have a general staff meeting at which members of the Division acting as host will be introduced and will discuss their problems. Following this, the staff will visit the laboratories of this Division for a first-hand view of the equipment and studies in progress. The first conference, held on August 30, was in charge of the Cotton Chemical Finishing Division.

Dr. Walter M. Scott attended a meeting of the Southeastern Section of the American Association of Textile Chemists and Colorists in Macon, Ga., and on the same trip visited the mills of the West Point Manufacturing Co., West Point, Ga., and the Callaway Mills, La Grange, Ga.



Dr. K. S. Markley and A. E. Bailey spent about ten days at various plants and factories of the Middle West consulting with the engineering and development staffs relative to the design, construction and erection of pilot plant processing equipment for the Southern Laboratory for work on cottonseed and peanuts. Efforts were made to determine what shop facilities and materials were available and what substitutes could be employed to replace strategic metals in fabricating the needed equipment.

The plants visited included the Girdler Corporation, Louisville, Ky.; Foster-Wheeler Corporation, Chicago, Ill.; Allis-Chalmers Manufacturing Co., Milwaukee, Wis.; C. O. Bartlett and Snow Company, Cleveland, Ohio; and Blaw-Knox Company, Pittsburgh, Pa. Conferences were also held with staff members of the research departments of the Edwall Laboratories and Swift and Company, Chicago, Ill. and Hiram Walker and Sons, Inc., Peoria, Ill. relative to certain oil and oilseed processing problems with which the laboratory is concerned.

Dorothy Beckemeyer has been recently appointed Junior Librarian at this laboratory. Miss Beckemeyer received the degrees B.A. from Newcomb College, majoring in classics and literature, and the B.S. in Library Science from the Louisiana State University library school, which she attended under a fellowship. Upon graduation, she was employed by the New Orleans Public Library where she progressed to Head of the Reference Department.

Among visitors to the laboratory during the month, for conferences with our research staff, were the following:

Messrs. A. D. Stewart, Regional Director, Farm Security Administration, Little Rock, Ark. B. T. Dodder, Senior Cooperative Specialist, Rural Rehabilitation Division, F.S.A. and W. M. Crumpton, manager of the Laurel Starch Plant, who conferred regarding work of the starch plant; W. F. Harrison, District Manager of the DuPont Co., at St. Louis, E. B. Feeney, DePont representative in Buenos Aires, Argentine, and Wm. D. Beck, local Sales Manager for DuPont; Dr. C. S. Hudson, Chief of Chemistry Division, National Institute of Health, Washington, D. C.; J. S. Mason, Wabash Railway local representative; S. A. Robert, Development Director of Gulf, Mobile and Ohio Railway, and P. D. Dorman, Executive General Agent of G. M. O.; J. J. Ganucheau, Southern Cotton Oil Co., Gretna, Pa.; John C. Helm, Secretary and Treasurer of the American Oil Chemists Society; Dr. I. D. Blair, New Zealand; Walter Gocchiaux, Vice-President, Godchaux Sugar Co., and several of his associates, and E. B. Ludwig of Ludwig Construction Company, New Orleans, La.; Walter J. Schwartz and several of his associates of the Flintkote Company, New Orleans, La.; Dr. Gordon Grosvenor, Yale University, New Haven, Conn., and E. E. Grosvenor, Phila., Pa.; William F. Offutt, University of Pittsburgh, and Dr. W. E. Wallace who is doing post doctorate study at the University of Pittsburgh under a grant from Carnegie Institution of Washington, D. C.; Wm. H. Becker, University of Missouri, Columbia, Mo., and Philip Tocker, Director, Trade Barriers and Penalties Section, National Cotton Council of America, Memphis, Tenn.



# NORTHERN REGIONAL RESEARCH LABORATORY

Dr. O. E. May conferred in Washington with the directors of the other regional laboratories and with members of the staff of the Bureau concerning the research program of the Northern Laboratory.

P. Burke Jacobs attended conferences with officials of the Bureau and other agencies in Washington on the problem of alcohol supplies and raw materials.

Dr. R. V. Williamson visited Toledo, Cleveland, and Dayton, Ohio; Washington, D. C.; Wilmington, Dela.; Philadelphia, Pa., Muskegon, Mich.; and Chicago, Ill., to confer with representatives of industry, Bureau and Department officials, and others interested in the utilization of lignin resins.

Dr. G. E. Hilbert attended the informal round-table discussions on the industrial utilization and chemistry of starch and related products sponsored by the Corn Industries Research Foundation, at Pocono Manor, Pa.

Dr. J. P. Kass attended the meeting of the American Chemical Society at Atlantic City, N.J., He also conferred with members of the staff of the Eastern Laboratory, in Philadelphia; with members of the staff of Woburn Degreasing Co., at Harrison, N.J., and the Hilo Varnish Co., at Brooklyn, N.Y., and with members of the staff of the American Cyanamid Co. at Stamford, Conn., in regard to the conjugation of unsaturated fatty acids and the use of the spectroscope as a tool in measuring conjugation.

Dr. Allen S. Phelps attended the Symposium on Respiratory Enzymes and the Biological Action of the Vitamins at Madison, Wisc.

Richard L. Slotter was at Argo, Ill., to confer with members of the staff of the Corn Products Company concerning the operation of the starch pilot plant at the Northern Laboratory.

Recent appointments to the staff are William C. Haynes, Assistant Bacteriologist, Fermentation Division, and Dr. Robert J. Dimler, Assistant Chemist, Starch and Dextrose Division. Mr. Haynes received his B.S. degree from Cornell University, and was previously Assistant in Research at the New York Agricultural Experiment Station. Dr. Dimler obtained his B.S. degree from Bradley Polytechnic Institute, and his M.S. and Ph. D. degrees from the University of Wisconsin. Before his appointment to this Laboratory he was a Post-doctorate Research Assistant at the University of Wisconsin.

Harry E. Roethe was the guest speaker at the meeting of the Rotary Club of Kewanee, Ill., on September 9. He discussed the objectives and the activities of the Northern Laboratory.

Messrs. H.P. Newton, K. S. Markley, and A. E. Bailey of the Southern Laboratory and R. W. Jackson of the Eastern Laboratory were in Peoria for conferences with members of the Laboratory staff.



The Fifth Annual Corn Improvement Conference, composed of geneticists and agronomists of the Department and agricultural experiment stations, primarily interested in corn breeding, was held in Urbana and Peoria, September 8 to 10. The meeting on September 10 was held at the Northern Laboratory and was attended by 56 individuals representing the Bureau of Plant Industry and the agricultural experiment stations of 20 States. Dr. O. E. May welcomed the group and briefly outlined the objectives and activities of the Laboratory, and Messrs. Hilbert, Manley, Schicktzan, Lathrop, Coghill, Melvin, Langford, and Shollenberger discussed the programs of their respective divisions. The morning session was concluded with a discussion by Drs. Jenkins and Bayles of the Bureau of Plant Industry of certain phases of the future program of the Conference with particular reference to assistance that could be given the Laboratory in procuring samples of corn already being produced commercially and also being studied experimentally by the geneticists. The meeting resulted in a real and intimate mutual understanding of the objectives and program of the Laboratory and of the Conference. During the afternoon the group was taken on a personally conducted tour of the Laboratory.

Recent visitors for special consultations with members of the Laboratory staff included the following: Dr. G. Bosschier, research chemist, Netherlands Indies Produce Corporation, New York City; New York City; Dr. L. M. Cooke, McGill University, Montreal, Canada; Dale Chapman and Fred Grafton, K. D. Chapman Company, Chicago; Dr. Charles Harmison, of American Maize Products, Boston, and Dr. J. B. Gottfried, Corn Products Refining Company, Pekin, Ill.; Dr. H. E. Barnard, Director of Research, National Farm Chemurgic Council, Columbus, Ohio; Dr. David Perlman, Biochemistry Department, University of Wisconsin; Dr. F. A. Irvine, Technical Director, Celotex Corporation, Marrero,; Dr. W. D. Harris, Texas A. and M. College; Dr. W. J. Roth, Chief, Economic Research Division, Soil Conservation Service, Washington, D.C.; Dr. Mark Stahmann, University of Wisconsin; Dr. R. J. Schacter, University of Chicago; Dr. C. W. Whittaker, Bureau of Plant Industry, Washington, D. C.; Dr. L. D. Haigh, University of Missouri; H. N. Steece, Experiment Station Record, Washington, D. C.; W. F. Voelpel, engineer, Commonwealth and Southern Corporation, Jackson, Mich.; Dr. H. A. Wilhelm, Iowa State College; Dr. Evelyn B. Tilden, National Institute of Health, Washington, D. C.; R. A. Griffin, Bureau of Agricultural Economics, Washington, D. C.; J. L. St. John, Agricultural Experiment Station, Pullman, Wash.

\* \* \*

#### WESTERN REGIONAL RESEARCH LABORATORY

Dr. T. L. Swenson has returned to Albany after a trip to Washington, D. C., where he conferred with Bureau officials regarding administrative matters pertaining to the Western Laboratory.

The general appearance of the Laboratory building and grounds has been markedly improved during the past month by the addition of a lawn and by a light buff colored stucco dash coating that has been applied to the exterior of the building.



On the evening of September 11, Ray H. Nagel, Technical Assistant to the Director, presented a talk on "Research on the Utilization of Western Agricultural Products" before the September meeting of the California Section of the American Chemical Society. On the same program Dr. C. H. Kunsman spoke before the Analytical, Microchemical, Physical, Inorganic group meeting. His subject was "Some Applications of Physical Methods to the Analyses of Agricultural Products."

Work on the dehydration project that the Bureau is conducting at the Western Laboratory is progressing nicely. Some of the equipment is in operation and experimental batches of dehydrated vegetables are being produced. Mr. Chace, Mr. Von Loesecke and Dr. Sando are now at the Western Laboratory in connection with this work. Several Regional Laboratory staff members are assisting.

H. V. Tartar, Professor of Physical Chemistry at the University of Washington, Seattle, Wash., visited the Laboratory on September 4, and conferred with members of the Physicochemical & Analytical Division regarding apparatus now being installed and methods of analysis.

Recently W. T. McGeorge, Head of the Department of Agricultural Chemistry and Soils of the Arizona College of Agriculture and Experiment Station inspected the laboratories and discussed problems of mutual interest, including quality of vegetables as effected by soils and fertilizer treatment.

Professor J. Norton Wilson and Dr. Verner Schomaker of the California Institute of Technology visited the Laboratory on August 6. They were particularly interested in the x-ray, electron diffraction, and chromatographic absorption program of the Laboratory.

\* \* \*

#### U.S. REGIONAL SOYBEAN INDUSTRIAL PRODUCTS LABORATORY, URBANA, ILL.

T. H. Hopper, Acting Director, spent August 13-15, in Washington conferring with Bureau officials regarding the laboratory work.

Dr. Donald H. Wheeler, Senior Chemist, attended the meetings of the American Chemical Society at Atlantic City, N.J. September 8-12

Arthur J. Lewis, Chemist, has been appointed a representative of the Department on the technical committee on paints and varnishes of the Federal Specifications Executive Committee.

Among visitors to the Laboratory during August were: A. E. Bailey and Dr. K. S. Markley of the Southern Regional Research Laboratory; A. F. Freeman of the Division of Agricultural Chemistry Research, Bogalusa, La.; Dr. T. A. Kiesselbach, Collaborator from Nebraska; A. J. King and Arthur Koop of the Agricultural Marketing Service, Ames, Iowa; Dr. J. L. St. John, State Chemist, State College of Washington, Pullman, Wash., and M. R. Stephens, Chief, St. Louis Station, Food and Drug Administration.

\* \* \*



## ENZYME RESEARCH LABORATORY

Dr. A. K. Balls spent the week end of September 6, at Pocono Summit, Pa., participating in a round-table discussion on the industrial utilization and chemistry of starch and related products, sponsored by the Corn Industries Research Foundation.

Dr. Balls has returned from the Agricultural Experiment Stations at Manhattan, Kansas, and Ames, Iowa, where he discussed cooperative work on grains.

Among the visitors to the Laboratory during the past month were Dr. F. C. Blanck of Pittsburgh, Dr. K. A. Bartlett of the Puerto Rico Agricultural Experiment Station, Arnold P. Yerkes, International Harvester Company, Chicago, Dr. F. L. Dunlap of Chicago, and Messrs Conquest and Kiele of Armour and Company, Chicago.

\* \* \*

## NAVAL STORES RESEARCH

C. F. Speh was in Atlanta, Ga. on August 19 to attend a conference with representatives of the Bureau of Agricultural Economics and the Forest Service, to develop a plan for making a naval stores survey.

W. C. Smith spent September 7 and 8 in Brooklyn, N.Y. where he conferred with Dr. W. H. Gardner of the Brooklyn Polytechnic Institute on a program for determining the softening point of rosin, in which Dr. Gardner is collaborating.

C. F. Speh conferred with representatives of the West Virginia Pulp and Paper Company and the Newport Industries, Inc., in New York City on September 9, on matters in connection with production and supply of naval stores. Mr. Speh also conferred with Dr. W. H. Gardner of the Brooklyn Polytechnic Institute on the program for determining the softening point of rosin.

Dr. E. E. Fleck attended the meetings of the American Chemical Society September 8-11. Enroute to Atlantic City, Dr. Fleck visited the Eastern Laboratory.

\* \* \*

## FARM STRUCTURES RESEARCH

J. R. McCalmont made a short trip to New Brunswick N.J., and conferred with Prof. J. W. Bartlett and W. C. Krueger regarding the silo pressure studies. He inspected the work being carried on at the Dairy Research Station at Sussex, N.J., where a 16-foot silo was being filled with corn silage.

First Lieutenant M. G. Cropsey, who was called to military duty on August 11 is now stationed at the Aberdeen Proving Ground, Md.



Harold J. Thompson, who was stationed at Beltsville, Maryland, working on temperature and humidity control of fruits and vegetables in transit was inducted in the army on September 10 and is stationed at Camp Lee, Va.

On September 15 and 16, A. D. Edgar, in charge of the potato storage investigations at Scottsbluff, Neb., was in the Washington office. He has conferred with officials of the University of Maine, in regard to Maine storage problems. Before he returns to Scottsbluff he will visit the experiment station at Ithaca, N.Y. and Detroit and East Lansing, Mich.

J. W. Simons gave a talk before the Rural Housing Section of the Women's Farm Home Week Program held at the University of Georgia August 9 to 16. He conducted the members through the test buildings, explained the experiments being conducted and pointed out how improvements can be made in farmhouses as determined from studies carried on in the test houses.

\* \* \*

#### FARM MECHANICAL EQUIPMENT RESEARCH

Inspection of the shipping facilities of the fertilizer factories of the southern seaboard as far south as Charleston, S.C. was made during the month by A. L. Mehring, Bureau of Plant Industry, and W. R. Humphries. This concludes the field work of a study, initiated the previous month at the northern ports, in connection with fertilizer plant problems created by the curtailment of coastwise cargo boats.

S. H. McCrory and R. B. Gray visited Laurel, Miss. September 2 and conferred with John W. Randolph relative to future plans of the sweetpotato production machinery project. On September 3 the trio conferred at Jackson, Miss. with Dr. Lynch and Dr. Dawson of the Southern Laboratory and Director Dorman of the Mississippi Station relative to cooperation and objectives of the cooperators. Mr. Gray returned to Washington September 5.

The construction of the garage and shop building at the Tillage Machinery Laboratory is nearing completion.

S. H. McCrory visited the Laboratory August 30, where he observed the construction in progress and discussed the plans for future work.

Dr. M. L. Nichols, Assistant Chief of the Soil Conservation Service, visited the Tillage Machinery Laboratory September 9 to confer on the use of special machinery and equipment for certain conservation practices.

R. M. Merrill spent several days in Southern Alabama observing methods of harvesting peanuts. Most of this harvesting at present is with one-mule equipment and hand methods.

On August 29 40 men comprising insecticide and fungicide dust manufacturers, pathologists from several State Departments and representatives of beet sugar and canning companies, visited the Toledo Laboratory for a demonstration and explanation of the technique followed in



testing duster equipment. The demonstration was a part of a field tour sponsored by pathologists of the Ohio Agricultural Experiment Station to show results of experiments with fungicides for the control of blight on sugar beets and vegetable crops.

On September 12 J. E. Wiss, Supervisor of the Industrial Division, U. S. Gypsum Company visited the Toledo Station to confer relative to the use of their products for insecticide and fungicide control.

A. T. Holman has been making studies of the use of power and machinery on the Farm Security Administration cooperative farms in the southern states. Investigations have included conferences with Farm Security Administration personnel in the regional offices of Montgomery, Ala., Little Rock, Ark., and Dallas, Texas, and field study on the farms. Field studies were made of four large farm projects in Louisiana, Texas, Arkansas and South Carolina. The Terrabonne, La. project includes four old plantations totaling 6,000 acres used as a cooperative farm by 80 clients in producing sugarcane, truck, Irish potatoes, grain, and livestock. Sugar cane production and harvesting operations are partially mechanized and present many problems in the design, construction, and use of mechanical equipment. Wichita Valley Farms, in Texas include an irrigated area of about 5,000 acres divided into 90 homesteads. A cooperative association owns and operates the heavy equipment including trucks, tractors, binders, threshers, and hay balers. The Lake Dick Farms, Arkansas, is a cooperative farm of about 5,000 acres operated by 70 machines in producing cotton, corn, small grain and livestock. The Ashwood Plantation in South Carolina totals about 11,000 acres subdivided into 190 homesteads. Each homestead is operated by a client in producing about 50 acres of cotton, corn, small grain, tobacco, sweetpotatoes, and asparagus. The cooperative association owns and operates a cotton gin, sweetpotato curing house, tractor, truck, thresher, feed mill, and grist mill.

R. M. Ramp and D. B. Eldredge, during the latter part of August, were engaged on field operations in fertilizer placement experiments with strawberries at several points in the southeastern section of North Carolina. Apparently the most productive strawberry plants are those receiving the most light as well as having the fertilizer located near the restricted root system. To meet such requirements in some of the treatments the fertilizer is drilled in a wide furrow at the center of the bed as well as in a furrow at each side of the bed.

G. A. Cumings represented the Bureau in the Agricultural Implement Industry Seminar September 3 to 10 which is sponsored by the American Society of Agricultural Engineers. Approximately 120 administrative officials, professors, and students from 40 colleges and research institutions attended the Seminar. The primary purpose of the Seminar is to provide a more intimate relationship between the Agricultural Implement Industry and the public institutions concerned with agricultural implements and especially to familiarize agricultural engineering students and instructors with the organization, procedures, and manufacturing processes of the implement industry. The Industry Seminar consisted of factory inspection trips, presentation of papers on various phases of the industry and informal discussions.



The delegates visited the cooperating companies at the following points: Minneapolis-Moline Power Implement Company, Minneapolis, Minn.; Allis-Chalmers Manufacturing Company, Milwaukee, Wis.; Oliver Farm Equipment Company, Chicago, Ill.; International Harvesting Company, Chicago, Ill.; Caterpillar Tractor Company, Peoria, Ill.; and Deere and Company, Moline, Ill. The entire program was pre-arranged to avoid duplication and permit the broadest contact with the industry.

The Seminar covered many essential phases of the implement industry including selection and testing of materials, foundry practice, forging, arc welding, machining of parts, heat treatment, assembly, shop management, education, safety practices, merchandising, accounting, advertising, credits and collections and responsibility to the farmer and stockholder. The high pressure salesmanship humorously described "as selling a milking machine to a farmer owning one cow and taking the cow as first payment" apparently is not a current policy but instead the industry is primarily concerned with the successful use of equipment by the farmer.

\* \* \*

#### PUBLICATIONS APPEARING OUTSIDE THE DEPARTMENT

- BALLS, A. K. (With F. E. ARANA, Puerto Rico Agr. Expt. Sta.) The curing of vanilla. (Indus. & Eng. Chem. 33(8): 1073-1075, August, 1941.
- BEAVENS, E. A. (With F. A. LEE, SA, N.Y. Agr. Expt. Sta.) How to make naturally flavored maraschino-type cherries. Food Indus. 13(7): 52-54, July, 1941.
- (With D. K. TRESSLER, SA, and R. F. CELMER, N.Y. Agr. Expt. Sta.) Bulk fermentation process for sparkling cider. Indus. & Engin. Chem. 33(8): 1027-1031, Aug. 1941.
- CROPSEY, M. G. (With T. E. LONG, SA, N.D. Agr. Expt. Sta.) Grain storage on the Farm. North Dakota Expt. Sta. Bull. 302, pp. 1-68, June, 1941.
- KNIGHT, H. G. Accomplishments of the bureau of agricultural chemistry and engineering, U. S. department of agriculture. The Chem. 18(5): 185-194, May & Summer, 1941.
- LAWRENCE, R. V. A comparison of the effects of slash and longleaf gums on cup materials. Naval Stores Rev. 51(21): 18, Aug. 1941.
- LOCKWOOD, L. B., TABENKIN, B. and WARD, G. E. The production of gluconic acid and 2-ketogluconic acid from glucose by species of pseudomonas and phytomonas. Jour. of Bact. 42(1): 51-61, July, 1941.
- PORGES, N., CLARK, T. F. and ARONOVSKY, S.I. Gluconic acid production. Indus. & Engin. Chem. 33(8): 1065-1067, Aug. 1941.
- RHOADES, H. E. The adaptive enzymes of certain strains of yeasts. Jour. of Bact. 42(1): 99-108, July, 1941.
- REID, J. DAVID, DRYDEN, E. C. and ARONOVSKY, S.I. Effect of monoethanolamine upon corn cob lignin, a preliminary investigation. Paper Trade Jour. Aug. 1941.
- ROSE, W. G. and JAMIESON, G. S. The composition of seven American linseed oils. Oil & Soap 18(8): 173-174, Aug. 1941.
- SCHREIBER, W. T. The cause of warp yarn breaks in weaving. Cotton (Serving the Textile Indus.) 105(6): 86-89, 93, June, 1941.



SHINGLER, G.P., LAWRENCE, RAY V, and MCCONNELL, N.C. Cleaning and painting turpentine cups. ACE-110, August 1941.

SMITH, W. C., REED, J. O., VEITCH, F.P. and SHINGLER, G.P.  
U. S. Patent 2,254,785. Gum Refining Process. Sept. 2, 1941.

STUART, L. S. and FREY, R.W. Preliminary evaluation of chemicals for use with salt in curing hides and skins. Jour. of Amer. Leather Chem. Assoc. 36(7): 384-399, July, 1941.

WHITTEMORE, E. R., DRYDEN, E. C. and ARONOVSKY, S.I. Conductometric analysis of sodium sulphite and ammoniacal pulping liquors. Paper Trade Jour. June 19, 1941.

\* \* \*

### CHANGES IN PERSONNEL

#### Recent Appointments - Indefinite or Probationary

Louise C. Schauer	Under Scientific Aide (Los Angeles, Calif)	Agr. Chem. Res. Div.
Alma Eleanor Nelson	Jr. Clerk-Stenographer	Chem. Lab. Equip Sec
Charlie Gage Thomas	Carpenter & Millwright (Stoneville, Miss.)	Cotton Gin. Inv.
Alexander Wunsch	Collaborator (Ft. Collins, Colo.)	Mech. Equip. Res.
Wansley Howard Cox	Agent (CC) (Athens, Ga.)	Farm Struc. Res.
J. Norton Graves	Under Engr. (Draftsman (Scottsbluff, Neb.)	" " "
George W. Schroeder	Agent. (Asst. Engr. Aide) (F.C.) (Ames, Ia.)	" " "
Gordon H. Houk	Asst. Mechanic (Corvallis, Oregon)	Fiber Flax. Inv.
Francis J. Lisowski	Jr. Clerk-Typist	Plans & Service
Lutitia B. Miner	Sr. Typist (Appt'd. 7-24-41)	" " "
Joel C. Underwood	Chief. Eng. Draftsman (Electrician)	" " "
Irving H. Kenyon	Painter, wae (Urbana, Ill.)	Reg. Soybean Lab.
Raymond F. Paschke	Asst. Scientific Aid (Urbana, Ill.)	" " "
Grace G. Thompson	Asst. Clerk-Steno. (Urbana, Ill.)	" " "
Edward M. Filachione	Assoc. Chemist	East. Reg. Res. Lab
Frederic R. Senti	Asst. Physicist	" " " "
Ansel P. Swain	Asst. Chemist	" " " "
Robert J. Dimler	Asst. Chemist	North. " " "
William C. Haynes	Asst. Bacteriologist	" " " "
Harriet L. Hendricks	Under Scientific Aide	" " " "
Charles G. Mahle	Skilled Laborer (Oiler)	" " " "
William H. Meyers	Guard	" " " "
Donald A. Barnes	Asst. Cotton Technologist	South. " " "
Charles F. Broker	Unskilled Laborer	" " " "
Raymond S. Burnett	Assoc. Chemical Technologist	" " " "
Catherine M. Gieseler	Under Clerk-Typist	" " " "
Lacy D. Wyrick	Asst. Cotton Technologist	" " " "
Donald L. Bell	Skilled Laborer	West. " " "
Eleanor H. Camp	Jr. Clerk-Steno.	" " " "
David Paul Coleman	Unskilled Laborer (Uncl.)	" " " "
Starkesville, C. Cooper	Skilled Laborer	" " " "
George L. Dehority	Asst. Scientific Aide	" " " "
John E. Garrity	Guard (Dur. of emergency)	" " " "



Doris J. Hirschmann	Junior Bacteriologist	West. Reg. Res. Lab.
Eleanor J. Hurley	Jr. Clerk-Stenog	" " " "
C. Rulon Jeppesen	Asst. Physicist	" " " "
Edison Lowe	Jr. Electrical Engineer	" " " "
Mortimer F. Masure	Assistant Chemist	" " " "
Linus Pauling	Principal Chemist	" " " "
Orville H. Rouse	Skilled Laborer	" " " "
Winfield L. Sylvester	Principal Glassblower	" " " "
Mrs. Florence L. Crosier	Jr. Stenog. (Appt'd 6-16-41)	" " " "
Robert L. Griffith	Carpenter's Helper	" " " "
Sidney W. Groshong	Steamfitter & Pipefitter	" " " "
William Snow Hamilton	Cabinetmaker	" " " "
Elmer Norton Wong	Minor Scientific Helper	
	(San Francisco, Calif.)	Agri. Chem. Res. Div.
Mrs. Evelyn N. Hemsley	Jr. Clerk-Stenog.	Audit Section
Eldon S. Sehnert	Agent (Under Engr. Aid) (Hays, Kans)	Farm Struc. Res. Div.
Valdimir V. A. Oglou	Assoc. Architect (Corvallis, Ore.)	Fiber Flax. Inv.
Dorothy E. Lancaster	Jr. Stenographer	Personnel Division
Herbert L. Bridgewater	Junior Scientific Aide	Reg. Res. Lab.
Mrs. Marjorie J. Hayes	Jr. Clerk-Stenog.	" " "
John A. Cannon	Unskilled Laborer (Uncl.)	North. Reg. Res. Lab.
Mrs. Eva McShane Culligan	Under Clerk-Typist	South. Reg. Res. Lab.

---  
Separations

Mary Nelle Graham	Under Scientific Helper	
	(Los Angeles, Cal.)	Agri. Chem. Res. Div.
Earl J. Daly	Clerk (Auditor)	Audit Section
Edith M. Harrison	Jr. Clerk-Stenog.	Chem. Lab. Equip Sec.
Mrs. Margery C. Hoenack	Jr. Clerk-Stenog.	" " " "
John M. Hammond	Unskilled Laborer (Uncl.)	
	(Stoneville, Miss.)	Cotton Ginning Inv.
Melvin Williams	Sr. Mechanic " " (Deceased)	" " "
John B. Dunn	Mechanic's Helper (Corvallis, Ore)	Fiber Flax Inv.
Mrs. Helen F. Frazier	Senior Stenog.	Miscel. Serv. & Rec. Div.
George T. Armstrong	Junior Chemist (Olustee, Fla.)	Naval Stores Res. Div.
Konkordy V. Abakumoff	Assoc. Elec. Engr. (To Booneville	
	Adm., Dept. of Interior)	Plans and Service
Thelma Anne Norton	Jr. Clerk-Typist	Purchase and Property
Donald M. Conn	Electrician's Helper	North. Reg. Res. Lab.
Heber D. Butler	Unskilled Laborer (Cleaner) (Uncl.)	West. " " "

---  
Bureau Employees on Furlough for Military Training and Service

Brown, Jr., James M.	Eastern Reg. Res. Lab., Wyndmoor, Pa.	Draftee
Hanna, Daniel Robert	Regional Soybean Lab. Urbana, Ill.	Draftee
Majors, Kenneth R.	Regional Soybean Lab. Urbana, Ill.	U. S. Army Reserves
Powers, Thomas N.	Eastern Reg. Res. Lab. Wyndmoor, Pa.	Draftee

\* \* \* \*

\* \* \*

\* \*

\*